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THE INSECT PEST SURVEY BULLETIN

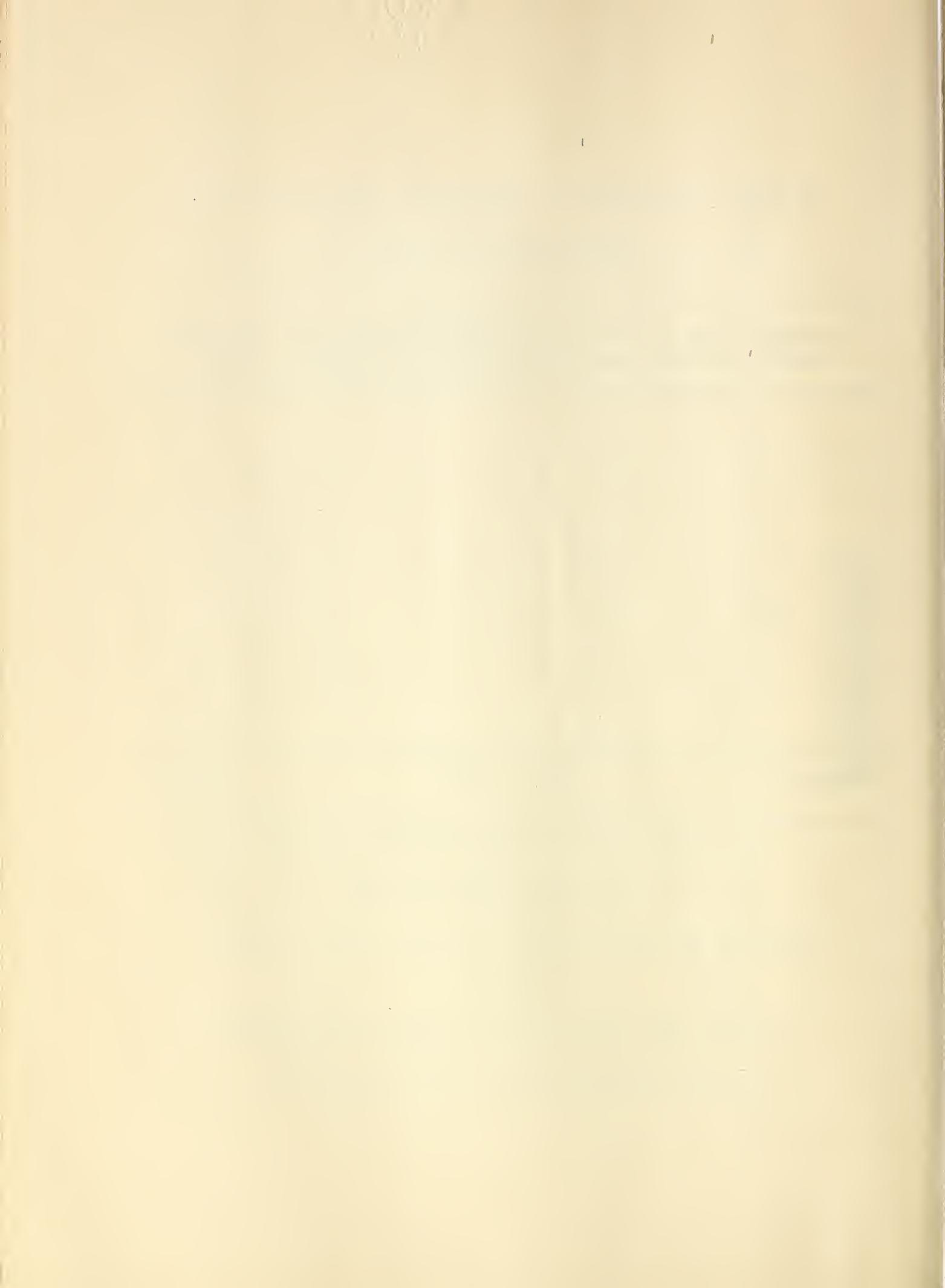
A periodical review of entomological conditions throughout the United States, issued on the first of each month from March to November, inclusive.

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I N S E C T P E S T S U R V E Y B U L L E T I N

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CUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR APRIL, 1926

Throughout the Southeastern and Gulf States cutworms seem to be unusually abundant.

The localized green bug outbreaks in the San Antonio section and northern Texas are now rapidly decreasing.

The army cutworm is doing considerable damage in northwestern Oklahoma, and central, western, and southwestern Kansas, where it is attacking wheat and alfalfa.

The clover leaf weevil is being reported as numerous in western Illinois and northwestern Arkansas.

The varicus fruit aphids continue to be reported as unusually scarce in the New England, Middle Atlantic and Ohio Valley States, westward to Illinois. In the Southeast reports of unusual abundance of the rosy apple aphid have been received from North Carolina.

The codling moth seems to have passed the winter in the Middle West in unusually large numbers. Similar reports have also been received from North Carolina. Pupation of this insect in the Pacific Northwest is abnormally early.

A somewhat extensive account of a new apple pest for this country (Lecanium coryli L.) appears in this number of the Survey Bulletin. This insect is appearing in serious numbers in western Washington State.

The European red mite is now reported from the Shenandoah Valley of Virginia. This seems to be the southernmost record for this pest.

The grape leafhopper is so abundant in parts of the San Joaquin Valley of California that considerable spraying will be necessary to prevent serious damage.

Larvae of the painted lady butterfly (reported in the last number of the Bulletin) are now attacking lettuce and prunes in parts of California.

The turnip weevil (Listroderes obliquus Gyll.) is reported for the first time from California. In the last number of the Survey Bulletin a note by Mr. Urbahns reported serious infestation in carrot fields and truck gardens in San Jose. At that time the larvae were believed to be those of Hypera sp.

The carrot rust fly is reported as a pest for the first time from Massachusetts.

A very early record for damage by the Colorado potato beetle was made at Ocean Springs, Miss., on March 29. Reports of infestation from several places over the Gulf region were received on and after the middle of the month.

The ~~egg~~plant leaf miner in role of a tomato seed-bed pest is reported from Sinaloa, Mexico.

From the moss examinations it is evident that the initial boll weevil infestation in Louisiana will be much heavier than last year and much heavier in the southern than in the northern part of that State. Mississippi Valley territory in general may expect from a medium to heavy infestation decreasing to the eastward but with sufficient weevils present to do serious damage provided summer weather conditions are favorable. In Texas the weevil population is so reduced in a large portion of the State that very abnormal weather conditions would be required to cause serious damage. It must be borne in mind, however, that these records only indicate the initial emergence of weevils and the final factor in determining damage will be the summer climatic conditions. Weevil emergence generally at the different cooperating stations during the first fifteen days of April has been considerably lower than was indicated by the emergence during March.

The sugarcane borer is abundant enough in the last year's refuse of the cane crop to indicate a serious infestation this year in Louisiana.

The sand fly (Culicoides punctipennis), has been so numerous in Freestone County, Texas, as to interfere with land breaking.

OUTSTANDING ENTOMOLOGICAL FEATURES IN CANADA FOR APRIL, 1926.

The grasshopper situation in British Columbia, during the unusually hot and dry summer of 1925, was the worst in the history of the province. If the summer of 1926 is a dry one, it is feared that there will be a repetition of the outbreaks.

The lesser migratory grasshopper, has greatly increased in numbers in the Nicola Valley, British Columbia, where it is replacing the roadside grasshopper, Cannula pellucida Scudder. The former species will be the predominant grasshopper to be dealt with in that section, during 1926.

The European corn borer continued to spread in southern Ontario, during 1925, twenty-five additional townships being infested. Over the greater part of the affected territory there was an increase in the percentage of infestation, and in some sections the corn crop was rendered useless for commercial purposes and of little value as a farm crop. Further spread and widespread increase in numbers is expected in 1926.

Two million individuals of Habrobracon brevicornis Wesm., and fifty thousand of Exoristes robator Fab., imported European parasites of the European corn borer, were liberated in southern Ontario during the period elapsing between the spring of 1923 and the autumn of 1925.

The red-backed cutworm was the most important insect pest in Saskatchewan during 1925, and was responsible for 90 to 95 per cent of all cutworm injury in the province. A severe and widespread infestation is expected in 1926, but natural control factors may materially affect the situation.

The pale western cutworm extended its range in Saskatchewan during 1925. In Alberta the infestation in 1926 will probably remain stationary.

Euxoa excellens Grt. is one of the most troublesome cutworm species on the coast of British Columbia.

Wireworms were a serious pest in Saskatchewan and Alberta, and locally in Manitoba, during 1925. They appear to be increasing in numbers and extending their range in Alberta.

The rose leafhopper is becoming of major importance as a pest of apples in many sections of the Okanagan Valley, British Columbia. It was epidemic in many orchards in New Brunswick during 1925.

The cottony peach scale, Fulvinaria amygdali, appears to be generally distributed throughout the Niagara fruit district, Ontario, but not in injurious numbers.

Outbreaks of the apple maggot occurred in sections of Nova Scotia during 1925. This species also appears to be on the increase in New Brunswick.

An outbreak of the fall cankerworm is expected in the Annapolis Valley, Nova Scotia, during 1926.

Slugs appear to be on the increase throughout the St. John River Valley, New Brunswick, where they attacked numerous varieties of garden and greenhouse plants during 1925.

The satin moth was found in two new localities in British Columbia, during 1925, at Courtenay and at Sydney.

GENERAL FEEDERS

GRASSHOPPERS (Acriidiidae)

Florida F. S. Chamberlin (April 17): Young hoppers, Melanoplus spp., are now emerging in considerable numbers in Gadsden County.

Nebraska M. H. Swenk (April 25): The first grasshoppers were reported hatching in Garfield County on April 12.

Texas C. H. Gable (April 20): Under date of April 13 W. A. Baker writes as follows: "A few differential hoppers, Melanoplus differentialis Thos., hatched out on the 5th of this month in the field. Since that time no further hatch has taken place. If we can get a few warm days in succession, I am looking for them to start their real hatching right away." This is about two weeks later than last year.

WHITE GRUBS (Phyllophaga spp.)

Mississippi R. W. Harned (April 21): May beetles have been reported by P. K. Harrison as injuring oak, pecan, shade trees, and rose in the vicinity of Picayune. The species most common on oak is Phyllophaga arkansana Schffr. Under date of April 19 Mr. Harrison wrote that the beetles had completely defoliated one oak tree and were hanging in clusters on the limbs. He also states that he has received several complaints about rose, pecan, and other shade trees being injured by May beetles. Phyllophaga micans Knoch seems to be the most numerous species on pecan and rose in that section at this time. This species has also been collected in numbers near Ocean Springs by H. Gladney and J. P. Kislanko, but so far no complaints of injury by these beetles in that section have been received. In the vicinity of A. & M. College these beetles have not yet appeared in numbers as large as usual because of cool weather and frequent rains. The most abundant species are Phyllophaga praetermissa Horn, Phyllophaga calceata Lec., and Phyllophaga perlonga.

Kansas J. W. McColloch (April 5): White grubs have caused serious damage to nursery stock grown at Bartlett.

CUTWORMS (Noctuidae)

Georgia Oliver I. Snapp (April 20): Cutworms are apparently unusually abundant this year. They are damaging spring gardens at Fort Valley. Poisoned bran bait had to be resorted to.

Florida F. S. Chamberlin (April 24): Few reports of cutworm damage from the northwestern district have been received this spring. Infestations are evidently much lighter than they were in 1925.

CLAY-BACKED CUTWORM (Feltia gladiaria Morr.)

Mississippi R. W. Harned (April 2): Specimens of cutworms collected from tomatoes at Durant have been identified by Mr. S. E. Crumb of the Bureau of Entomology, Clarksville, Tenn., as this species. The same species was also collected near English pea plants at Holly Springs, Miss. Although complaints in regard to cutworms have been received from many places throughout the State, especially from Copiah County, the specimens mentioned above are the only ones we have so far received.

Louisiana W. E. Hinds (April 24): Cutworms have been unusually abundant and injurious to garden crops and to strawberries particularly.

Nebraska M. H. Swenk (April 25): Cutworms were found actively working in the soil in fields being plowed on April 17 in Boone County.

Oregon B. G. Thompson (March 24): Eggs of the variegated cutworm, Lycophotia margaritosa Haw., were observed in a field at Corvallis on March 12. Eggs hatched on March 24. Nearly full grown larvae were numerous. A few adults were observed as early as March 1.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT

CHINCH BUG (Blissus leucopterus Say)

Illinois W. P. Flint (April 20): The weather has not been sufficiently warm to cause a general flight of chinch bugs from hibernation even in the south-central part of the State. Bugs have been active in hibernating quarters and very few observed flying on March 19.

Nebraska M. H. Swenk (April 25): The chinch bugs prove to have wintered with comparatively slight mortality over southeastern Nebraska, and by the middle of April were becoming active in large numbers in their hibernating retreats.

Kansas J. W. McColloch (April 19): Chinch bugs were flying in large numbers on April 17. This is the first marked flight of the year although some bugs have been moving since the middle of March.

GREEN BUG (Toxoptera graminum Rond.)

Oklahoma C. E. Sanborn (April 1): Green bugs have been prevalent all winter but no serious outbreak has or will occur. A heavy snowstorm recently prevailing throughout the State may aid them some from the standpoint of propagation by preventing inimical insect control, but I consider it most too late for the green bug to do much damage.

Texas J. H. Gable (April 20): Green bugs have been plentiful in the San Antonio section this spring. Some fields were damaged as much as 25 per cent but infestations are now rapidly decreasing. Last year was one of the driest ever known here. No crops were made, there was no volunteer grain, and no grass in most of the section. W. A. Baker reports that infestation in northern Texas has just about run its course and that conditions there were much the same as here. The temperature deficiency from January 1, 1926, to April 1, 1926, is 35°. With the exception of 1921, this has been the wettest March in 41 years.

PLAINS FALSE WIREWORM (Eleodes opaca Say)

Kansas J. W. McColloch (April 5): False wireworms were received from Greeley County with the information that they were doing considerable injury to wheat.

ARMY CUTWORM (Chorizagrotis auxiliaris Grote)

Kansas J. W. McColloch (April 19): Wheat has been injured in Seward, Clark, Haskell, Cloud, Kiowa, and Thomas Counties. Alfalfa has been damaged in Gove, Russell, Butler, and Riley Counties.

Oklahoma C. E. Sanborn (April 1): The cutworm has also appeared in wheat again this year. In addition to wheat damage, considerable alfalfa damage is resulting. The northwestern part of the State is infested.

ARMYWORM (Cirphis unipuncta Haw.)

Illinois W. P. Flint (April 20): Adults of the true armyworm were found in peach orchards in southern Illinois in large numbers during the week of April 12. The adults were feeding on the peach blossoms at night. They were also in plum trees in the same district. On one night it was estimated that a 20-acre block of peaches had an average of at least 12 armyworm adults per tree.

CORN

LEPIDOPTEROUS LARVAE (Species undetermined)

Mexico A. W. Morrill (April 20): An average of three or four worms to each stalk in the pretassel stage are present in field corn at Los Mochis. Apparently they are doing considerable damage but it will be impossible to estimate how much until the corn is older.

EUROPEAN CORN BORER (Pyrausta nubilalis Hubn.)

New York P. M. Eastman (April 29): On the Ulrich flats along the Mohawk river near Scotia where the Bureau of Plant Industry first started clean-up work in 1919, conditions for the development of the insect this spring are, I believe, unusually favorable. The total acreage in corn planted last year is about 35 acres, 25 of which is or was planted to sweet corn. On about one-half of the sweet corn acreage the cornstalks still remain standing. High water has covered portions of the fields and many of them have been broken off and washed to the river bank and caught with other débris in the weeds. After a cursory

examination of one field of about 15,000 hills, I believe a 50 per cent infestation would be a very conservative estimate. I examined 7 hills and found them to contain 2, 4, 11, 2, 4, 5, and 5 larvae respectively. Many of the larvae were well up toward the tassel end in the old stalks. The larvae are beginning to become lively and were crawling into uninested portions of the stalks.

A casual examination of old stalks which had been washed in by the high water revealed many larvae. On plots where the corn had been cut last year I found hardly a larva. Cornstalks are scattered all over the farm, in the manure piles and fields and around hotbeds. It might be of interest to note that corn and broom corn have been grown on these flats probably for the past 50 years. With the exception of 1919 no definite plan of eradication work has ever been attempted in this area.

ALFALFA

MOUND BUILDING PRAIRIE ANT (Pogonomyrmex occidentalis Cresson)

Kansas J. W. McColloch (April 1): This ant is reported abundant in a 20-acre alfalfa field at Windom, and is ruining the stand.

PEA APHID (Illinoia pisi Kalt.)

Kansas J. W. McColloch (April 20): A heavy infestation of the pea aphid has developed in an alfalfa field at Belvidere. The plants are turning yellow and dying down.

Oregon Sadie E. Keen (April 3): This insect was present in damaging numbers on several fields of vetch in an isolated side valley of the Willamette near Wapato. A fair percentage of the aphids were attacked by Entomophthora aphidis, and syrphid larvae were also present.

CLOVER

CLOVER LEAF WEEVIL (Hypera punctata Fab.)

Illinois W. P. Flint (April 20): Mr. J. H. Bigger reports finding one adult of the clover leaf weevil in a clover field in western Illinois. Larvae, mostly very small, are numerous in clover, alfalfa, and sweet clover fields throughout the State.

Arkansas Dwight Isely (April 22): The clover leaf weevil is quite common this year in the vicinity of Fayetteville. Weevil larvae are not abundant enough to cause what might be considered an outbreak, but their occurrence in any numbers is unusual. Ordinarily they are a curiosity in this vicinity.

FRUIT INSECTS

APPLE

APHIIDAE

Massachusetts A. I. Bourne (April 21): It seems to be very generally true over

the State as a whole that apple plant lice are considerably reduced in numbers over last season, except for a few cases in individual orchards where for some reason or other there happens to be a considerable abundance. There is every indication that orchard plant lice will not be a serious factor this coming season.

Virginia W. S. Hough (April 16): None of the three species of aphids, Anuraphis roseus Baker, Rhopalosiphum prunifoliae Fitch, and Aphis pomi DeG., which usually appear on apple trees have appeared this season. Only two rosy apple aphids have been found to date and but two nymphs of Rhopalosiphum prunifoliae Fitch have been observed on the apple buds. Between \$12,000 and \$15,000 worth of nicotine sulphate is usually used in the delayed dormant spray in orchards near Winchester, but this year the delayed dormant spray was applied without nicotine.

West Virginia W. E. Rumsey (April 18): Aphid eggs, all species, are very scarce about Morgantown and also about Charleston, Kanawha County. In the eastern panhandle none of the Station men have been able to find any aphid eggs on the apple trees in Berkeley and Jefferson Counties.

Indiana Bennet A. Porter (April 27): All species of apple aphids are almost totally absent from the orchards at Vincennes. No aphids have been seen except a half dozen individuals, which were probably the green apple aphid.

Illinois W. P. Flint (April 20): Examinations of apple trees in the cluster-bud stage in southern Illinois orchards have failed to reveal a single aphid of any species present. The same is true of central Illinois, where the trees are just showing green tips. It seems certain that aphids will be very scarce in Illinois apple orchards this season.

APPLE APHID (Aphis pomi DeG.)

Maryland Ernest E. Cory (April 2): The green apple aphid hatched at College Park on March 27.

ROSY APPLE APHID (Anuraphis roseus Baker)

Maryland Ernest E. Cory (April 2): The rosy apple aphid is extremely scarce at College Park.

North Carolina Z.P. Metcalf (March): The eggs of what appears to be this species are much more abundant in the mountains of the State than during the average season.

Oregon Don C. Mote (March 19): Stem mothers with small colonies were first observed on this day on the developing cluster buds. All eggs observed had hatched.

CODLING MOTH (Carpocapsa pomonella L.)

North Carolina Z.P. Metcalf (March): The hibernating larvae seem to be more abundant than usual at this season of the year in the mountains of the State.

Indiana Bennet A. Porter (May 1): Observations indicate that pupation has been in progress for a week or more.

Illinois W. P. Flint (April 20): Overwintering larvae in observation cages have come through in such numbers as to indicate the lowest winter mortality for several years. Apparently there will be considerable trouble from this insect if the weather of the spring is favorable to its increase.

Washington E.J. Newcomer (April 1): On account of the very early season nearly 10 per cent of the wintering codling moth larvae have pupated by April 1 in the Yakima Valley. The season is fully three weeks ahead of normal on this date. In the spring of 1925, about 50 individuals of the codling moth parasite Ascogaster carpocapsae Vier. were libenate in an orchard in which no parasites had previously occurred. An examination of worms in this orchard, made late in March, 1926, showed a parasitism of approximately 6 per cent.

LEAF CRUMPLER (Mineola indiginella Zell.)

Nebraska M. H. Swenk (April 25): The leaf crumpler was found to have a menacing number of winter nests in an orchard in Garden County early in April.

RED-BANDED LEAF ROLLER (Eulia velutinana Walk.)

Virginia W.S. Rough (April 16): At Winchester moths began to emerge from wintering pupae on April 4. Large numbers have been observed flying in certain orchards on favorable days. The first egg masses were found on April 14. This insect appears to be very abundant in certain orchards.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

Massachusetts A.I. Bourne (April 23): The apple tent caterpillar in the eastern part of the State is proving to be very much less abundant than at any time within the last few years, showing a marked decrease from the numbers present last year. In spite of the very heavy infestation which was present in the western part of the State, our reports to date indicate very little if any increase except locally here and there.

Connecticut J.L. Rogers (April 25): Small tents made by newly hatched larvae are to be seen at New Haven.

Illinois W.P. Flint (April 20): This insect will be fairly abundant again this season in southern Illinois. Eggs are just hatching and

the young caterpillars are starting to form their tents.

APPLE AND THORN SKELETONIZER (Hemerophila pariana Clerck)

Connecticut

W.E.Britton (April 26): The first adult was seen this spring on the window of a garage at New Haven. This insect has not been a conspicuous pest in Connecticut during the last two seasons.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

North Carolina

Z.P.Metcalf (March): This pest seems to be generally under control in the mountains of the State.

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

North Carolina

Z.P.Metcalf (March): This pest seems to be generally under control in the mountains of the State.

Illinois

W.P.Flirt (April 20): This insect has continued to increase in abundance throughout central and northern Illinois during the past season. It is now found not only in towns but in many country districts where it is causing the death of ash, soft maple, and poplar, being most severe on the ash.

ELM SCURFY SCALE (Chionaspis americana Johns.)

North Carolina

Z.P.Metcalf (March): This scale is very bad in the mountains of the State on fruit trees in isolated orchards.

A NEW PEST (Lecanium coryli L.)

Washington

Harold Morrison (March 31): In July, 1924, specimens of this insect were received for determination from Prof. Trevor Kincaid of the University of Washington. Attention was called to the fact that this was the first known record of the presence of this coccid in the United States. In March of this year further specimens were received from the same source with information that showed clearly that the pest is well established in Seattle at least.

In the Canadian Insect Pest Review, Volume 2, No. 4, July, 1924, an important outbreak of this insect on shade trees in Stanley Park, Vancouver, B.C., was reported. The insect was recorded from maple, horse-chestnut, lime, mountain ash, laurel, hawthorn and raspberry. In the April number of the same publication for 1925 it is recorded as having first been introduced in Stanley Park in the fall of 1923.

In the Western Plant Quarantine Board News Letter, No. 5, May, 1925, is a note to the effect that this insect was introduced to Vancouver on nursery stock from Europe more than 20 years ago, that it was fairly successfully exterminated in 1910, but that unfortunately infestation had spread to some wild growth near by, resulting in the gradual increase of recent years.

This insect is widely distributed in Europe, being recorded

from Czechoslovakia, Dalmatia, Germany, England, France, Holland, Italy, Istria, Luxemburg, Moravia, Austria, Sardinia, Sweden, Switzerland, Tyrol, Hungary, and various small islands adjacent to Europe.

In Europe this insect has been recorded as occurring on a wide variety of host genera including Acer, Aesculus, Alnus, Arbutus, Betula, Carpinus, Cornus, Cotoneaster, Cydonia, Euonymus, Juglans, Mespilus, Pyrus, Populus, Prunus, Quercus, Rosa, Rubus, Salix, Sarothamnus, Tilia, Ulmus, Vaccinium, and Vitis.

This insect was reported from the North American Continent more than 25 years ago from Nova Scotia.

R. L. Webster (April 21): I am sending you samples of a Lecanium which has this year become very abundant on the West side. A letter from Arthur Frank, Plant Pathologist, at the Western Washington Experiment Station, Puyallup, says: "We are simply overwhelmed with inquiries about the Lecanium scale at this time! We have always had an infestation of these in the orchards east of Lake Washington opposite Seattle from which we have heard for several years. However, this season the pest is appearing in unprecedented numbers and severity. The same situation exists in Whatcom County at Bellingham.

EUROPEAN RED MITE (*Paratetranychus pilosus* C. & F.)

Massachusetts

A. I. Bourne (April 23): The European red mite appears to be rather more abundant than ever, particularly in the eastern sections of the State, with apparently a particularly heavy infestation at various points in Essex County.

Virginia

Theron P. Remy (April 23): While visiting the orchards in the Shenandoah Valley the European red mite was noted at Waynesboro, Va., in several apple orchards. As it is not reported from that far south I thought it might be of interest. This was verified by Mr. Hough of the Winchester Va., Laboratory.

W. S. Abbott (April 26): The eggs of this mite were very abundant last spring (1925), but none could be found this spring (1926) at Oakton. No special treatment for this mite was applied.

Washington

E. J. Newcomer (April 1): Winter eggs of the European red mite began hatching at Yakima on March 28, about two weeks earlier than last year. Ordinarily hatching begins about the middle of April.

PEACH

Indiana

Bennet A. Porter (April 27): Winter mortality has been fairly

SAN JOSE SCALE (*Aspidiotus perniciosus* Comst.)

high for Vincennes, but lower than last year. Counts of 8,000 scales from a peach orchard in vigorous condition showed in early March a mortality of 48.6 per cent. Counts, made April 27, of material from a long-standing infestation in an apple orchard in poor condition showed 72 per cent mortality.

Kansas J. W. McColloch (April 15): Peach twigs heavily encrusted with scale were received from Coats, with the information that the entire trees were in a similar condition.

TARNISHED PLANT BUG (Lygus pratensis L.)

Indiana Bennet A. Porter (April 27): At Vincennes this species is present in small numbers in all peach orchards around the buds, blossoms, and newly set peaches. It is much less numerous than it was last year at this time.

Illinois W. P. Flint (April 20): On April 16 the tarnished plant bug was taken by Mr. Chandler for the first time in peach orchards in southern Illinois.

PLUM CURCULIO (Conotrachelus nemuphar Hbst.)

North Carolina R. W. Leiby (April 8): The first plum curculio of the season was jarred from peach trees at our Aberdeen peach insect laboratory by J. A. Harris on April 6. This is about 17 days later than the season of 1925 and about 10 days later than the average of the past four years.

Georgia Oliver I. Snapp (April 20): Indications point to a curculio infestation lighter than normal. Very few "stung" peaches have been noted to date at Fort Valley. Spring has been unusually cool, and this may be keeping the adults in hibernation longer than usual. These conditions have caused the growers to omit a part of the program for curculio suppression. (April 21):

A number of eggs and one larva 3 or 4 days old were found in small peaches in an orchard near Fort Valley today. Curculio oviposition is later this year than normally. Usually only one generation occurs when the overwintered females are late in beginning to oviposit.

PEACH TWIG BORER (Anarsia lineatella Zell.)

Georgia Oliver I. Snapp (April 16): The first report of injury to new growth of young peach trees by this insect was received today from H. C. Haynes of Canton. The peach twig borer is common in this State, but is seldom of economic importance as a peach pest.

PEACH BORER (Aegeria exitiosa Say)

Georgia Oliver I. Snapp (April 20): Paradichlorobenzene has again injured 1, 2, and 3 year old peach trees in experimental orchards in this latitude. Some injury has also resulted this year from the use of paradichlorobenzene around 4-year-old trees. Trees above four

years of age were uninjured. It is thought that frequent rains following the paradichlorobenzene applications last fall prevented the usual diffusion of the gas through the soil, thereby causing an abnormal concentration of the gas near the tree trunk at and below the charge of crystals.

ORIENTAL FRUIT MOTH (*Laspeyresia molesta* Busck)

Georgia Oliver I. Snapp (April 20): Spring-brood moths are now emerging at Fort Valley. First-generation egg oviposition has started. The cool spring has delayed the emergence of adults of the spring brood. The incubation period of first-generation eggs has been as long as 8 days during the cool weather.

CHERRY

PEAR THIRIPS (*Taeniothrips inconsequens* Uzel)

Oregon Don C. Mote (March 16): Adults of the pear thrips were first observed in the developing buds on this date, at Salem. Apparently the peak of emergence was reached March 10, 1926.

FRUIT TREE LEAF BEETLE (*Syneta albida* Lec.)

Oregon Don C. Mote (March 19): At Salem and Corvallis a few beetles were first observed flying on this date. A few adults were found in the pupal cells in the soil and a few larvae in the soil. The majority are in the pupal stage in the soil on this date.

PLUM

RUSTY PLUM APHID (*Hysteroneura setariae* Thos.)

Mississippi R. W. Harned (April 21): The southern plum or rusty plum aphid has been received from several places throughout the State.

Texas F. C. Bishopp (April 26): Most of the plum trees in Dallas are heavily infested with the plum aphid. They are sufficiently numerous in many cases to cause the withering of the terminal leaves and shrinking and falling of the fruit.

GRAPE

GRAPE LEAFHOPPER (*Erythroneura comes* Say)

California T. D. Urbahns (April 20): Adult leafhoppers are reported as very abundant by H. C. Lewis, assistant entomologist, in parts of the San Joaquin Valley, Merced, Fresno, and Visalia, this spring. Considerable spraying will be necessary to prevent severe damage.

PECANS

APPLE TWIG BORER (*Amphicerus bicaudatus* Say)

Mississippi R. W. Harned (April 21): More complaints have been received in

regard to this insect damaging pecan trees during the past few weeks than ever before. Most of these complaints have come from other counties. Apples and grapes have also been injured.

CITRUS

MELON APHID (*Aphis gossypii* Glov.)

Mississippi R.W.Harned (April 21): The melon aphid was collected on orange trees at Pascagoula, Jackson County, on April 8.

TRUCK-CROP INSECTS

GENERAL FEEDERS

PAINTED LADY (*Vanessa cardui* L.)

California T.D.Urbahns (April 10): H.C.Lewis, assistant entomologist, aided the Horticultural Commissioner in control measures where larvae were attacking lettuce fields and prune orchards at Hollister. Weeds favored by larvae were dipped in arsenical solutions and scattered in lettuce fields and at the base of young trees. Good control was secured.

APHIIDAE

Louisiana W.E.Hinds (April 24): Aphids continue to be unusually abundant on many field and garden plants and also on roses and other ornamentals.

TURNIP

TURNIP APHID (*Rhopalosiphum pseudobrassicae* Davis)

Mississippi R.W.Harned (April 21): The turnip aphid has been reported as very abundant at Holly Springs, A. & M. College, Durant, Meridian, Natchez, and other places.

TURNIP WEEVIL (*Listroderes obliquus* Gyll.)

Mississippi R.W.Harned (April 21): Inspector R.P.Gelmer reports severe damage from the turnip weevil to turnips at Moss Point, on April 15. Very severe damage to the tops of onions by this insect at Bay St.Louis in Hancock County was reported by K. L.Cockerham on April 2.

P.K.Harrison (April 26): In every garden in Pear River County that Mr. Deen and I examined for this insect it was present. Collections have been made on turnips and mustard.

Louisiana W.E.Hinds (April 24): The Australian tomato weevil has been found injuring potatoes at Raceland. I believe that this record

shows an advance in the spread of this pest in this State.

California T.B.Urbahn (April 22): Larvae reported in April as *Hypera* prove to be this species. Adults are now abundant in the field attacking foliage of turnips and carrots at San Jose. Small, medium sized, and fully developed larvae and pupae can also be located. An immediate attempt will be made to prevent spread and development of this species.

CARROT

CARROT RUST FLY (Psila rosae Fab.)

Massachusetts A.I.Bourne (April 21): W.D.Whitcomb of the substation at Waltham reports the carrot rust fly, *Psila rosae*, as causing severe injury to carrots and parsnips in storage. Two definite reports of the occurrence of this pest came from Pittsfield in Berkshire County and from Hathorne in Essex County. This is, I believe, the first time that this particular species has been definitely recognized as a pest in this State.

RAPE

GREEN PEACH APHID (Myzus persicae Sulz.)

Mississippi R.W.Harned (April 21): The green peach aphid was reported as damaging rape at Nettleton, Lee County, on April 16.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Florida F.S.Chamberlin (April 21): Young larvae of the potato beetle are rather abundant at this time in Gadsden County.

Mississippi R.W.Harned (April 21): The Colorado potato beetle was reported by inspector G.R.Williams as damaging tomatoes at Durant April 14. Inspector R.P.Colmer reported it as damaging Irish potatoes at Pascagoula on April 15, and P.K.Harrison reported it as damaging Irish potatoes at Picayune on April 15. Inspectors Gladney and Kislanko have reported this insect as damaging Irish potatoes at Ocean Springs on March 29. I believe that these are the earliest records we have received in regard to it this year.

Louisiana W.E.Hinds (April 24): The Colorado potato beetle is less abundant than usual at this date, but the potato crop is at least three weeks later than last season.

EGGPLANT LEAF MINER (Phthorimaea glochinella Zell.)

Mexico A.W.Morrill (April 20): This pest has been unusually abundant during the past season (September to April) at Los Mochis,

Sinaloa, Mex. In September its unusual abundance in tomato seed beds was noted, and as the season progressed it increased rapidly until by the first of April it was not uncommon to find from 50 to 75 per cent of the tomatoes infested where control measures had not been used. Parasites were present but not effective.

BOLL WORM (*Heliothis obsoleta* Fab.)

Mexico

A.W.Morrill (April 20): Comparatively few were found attacking tomatoes in March in Fuerte Valley in Sinaloa, Mex., average being between 3 and 5 per cent. In Mayo Valley (Navojoa), Sonora, the average infestation was 5 per cent.

CABBAGE

CABBAGE APHID (*Brevicoryne brassicae* L.)

Mississippi

R.W.Harned (April 21): The cabbage aphid was reported as very abundant at Holly Springs, A.& M. College, Durant, Meridian, Natchez, and other places.

STRAWBERRY

STRAWBERRY ROOT APHID (*Aphis forbesi* Weed.)

Louisiana

W.E.Hinds (April 24): Strawberry root aphids are common but not generally serious here.

ASPARAGUS

ASPARAGUS BEETLE (*Crioceris asparagi* L.)

Oregon

L.P.Rockwood (April 2): Adults are very numerous at this time at Forest Grove, and threaten future damage.

PEAS

BOLL WORM (*Heliothis obsoleta* Fab.)

Mexico

A.W.Morrill (April 20): The bollworm, after a season of unusual activity in 1925, appears to be less numerous than usual. No damage was reported by pea growers as last season and none was observed in packing sheds.

GARbanzoS

LEPIDOPTEROUS LARVAE (Species undetermined)

Mexico

A.W.Morrill (April 30): At Los Mochis, Sinaloa, Mex., worms were fairly common on garbanzo plants but damage to the pods did not exceed 5 per cent. There are no observations in previous years for comparison.

CUCUMBERS

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

Maryland E.N. Cory (April 2): Diabrotica vittata was collected from hibernating quarters on the 10th at College Park.

Mississippi R.W. Harned (April 21): A few specimens of the striped cucumber beetle (Diabrotica vittata) were collected on cucumbers at Moss Point on April 13.

SPOTTED CUCUMBER BEETLE (Diabrotica 12-punctata Fab.)

Mississippi R.W. Harned (April 21): On March 24 this insect was observed on peach trees in Lowndes County. On the same date it was observed on pear, bean, and pecan at Ocean Springs, Jackson County. In neither case was any damage of importance noted. On April 14 Inspector G.R. Williams, at Durant, reported Diabrotica 12-punctata on tomatoes and peach trees. He also added a note to the effect that these insects had been observed on green plants over his entire territory which includes five counties. K.L. Cockerham reported a very few specimens on sweet pea plants at Biloxi on April 12. A few specimens were also collected from cabbage and bean plants at Moss Point and Ocean Springs in Jackson County on April 13. Slight damage was reported to turnips from Holly Springs and Meridian on April 10. Severe damage to roses was reported from Picayune.

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

Oregon Don C. Mote: This species was first observed on the wing on March 6. Peak emergence from winter quarters was reached by March 22.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

Mississippi R.W. Harned (April 21): One specimen of Anasa tristis was observed on beans at Ocean Springs on April 2.

ONIONS

ARMY CUTWORM (Chorizagrotis auxiliaris Grote)

Kansas J.W. McColloch (April 19): A report of injury to onions was received from a truck farmer in Sedgwick County.

ONION MAGGOT (Hylemyia anticua Meig.)

Oregon Don C. Mote (March 20): A few flies were observed on the wing on this date. The majority are in the soil in the pupal stage.

A BLISTER BEETLE (Meloe laevis Leach)

New Mexico J.R.Douglass (April 2): 115 adults were noted feeding on tops of old onions that had stood in the garden all winter. Rhubarb is the only other green plant in the neighborhood. No feeding was noted on any of the rhubarb plants.

S O U T H E R N F I E L D - C R O P I N S E C T S

COTTON

BOLL WEEVIL (Anthonomus grandis Boh.)

North Carolina R.W.Leiby and assistants (April 13): Weevil mortality was apparently heavy during the past winter if hibernation survival is a fair index. In early November, 1925, the average population alive per ton of moss in three localities was 552 with none dead, the maximum being 1,283 and the minimum 114. In February and March, 1926, two localities showed an average of 99 weevils per ton of moss and not a single one alive.

Florida A.F.Camp and E.S.Grossman, through E.W.Berger: Since late summer weather conditions favored a new growth of cotton fruit throughout the greater part of the cotton-growing area in the State, an abundant food supply was available for the great number of weevils present in all fields. Consequently, numerous weevils were fitted for successful hibernation. Cool weather of some duration forced the weevils into rather secure quarters for the winter and it is problematical whether or not the more severe cold snaps of later date have had the usual effect of considerably thinning them. At present there appear to be no active weevils about.

Louisiana W.E.Hinds (April 24): During April the emergence of the boll weevil has continued in increasing numbers at Baton Rouge. Over 2 per cent of the 13,000 weevils placed in hibernation cages here last fall have now emerged, and we anticipate that this will not be over one-third of the total to come on account of the season being very wet and late here. Only a small part of the cotton has yet been placed in southern Louisiana.

Oklahoma C.E.Samborn (April 1): The boll weevil count thus far indicates that but very few weevils have passed safely through the winter. We do not wait for the weevils to issue but we sort the hibernating material in each cage and obtain the weevils, thus getting the percentage of overwintering forms. We have finished about half of the work and have found no live weevils.

General Statement B.R.Coad: The annual examinations for the purpose of determining the survival of the boll weevil in hibernation have been completed. These examinations have been made every year since 1915. Up to 1924 they were made only in the vicinity of Tallulah,

where the principal laboratory is located, but for the last two years additional points have been included for the purpose of making these records more widespread in their application. As usual these examinations have been made only in Spanish moss, and the findings are recorded in live weevils per ton of moss. The records from the beginning of this work to last year are shown in the following tabulation:

Year	Live weevils per ton of moss
1915	10.0
1916	24.0
1917	8.0
1918	1.7
1919	4.0
1920	9.5
1921	22.0
1922	127.0
1923	19.0
1924	0.5
1925 (Northern Louisiana)	0.6
1925 (Southern Louisiana)	31.0
1925 (Ga. & S.C.)	31.0

During the present winter still more points have been included with the idea of developing within the next few years a selected series of localities representative of the different districts of the Cotton Belt. This season's examinations were distributed throughout Louisiana from the south to the north at perhaps 50 different points so that a fairly representative average condition is reported. In the southeast another group of points was selected in Georgia and still another in South Carolina. The following are the figures secured during March, 1926; at these various points:

State	Live weevils per ton of moss
Louisiana	43
Georgia	2.3
South Carolina	7

In contrasting these figures with past years, it should be remembered that the inclusion of new points prevents an absolutely accurate comparison; but these records do indicate something of what may be expected in the amount of weevils coming from hibernation. For example, it is obvious that the initial infestation in Louisiana will be much heavier than last year. It will be very much heavier in southern Louisiana than in the northern part of the State, but the year-to-year contrasts remain the same, and it is apparently, in the State as a whole, we can expect at least a normal infestation. Spotted conditions may be expected owing to the irregular distribution of leaf worm defoliations last fall. In the Southeast, the Georgia points examined extend across the coastal plain section and thus represent a territory in which the weevil crop was comparatively light last fall. This was

illustrated by the early fall examinations for weevils entering hibernation. The same remarks apply to South Carolina where the examinations were made along the coastal section of the State extending as far north as Florence. Under the circumstances, it seems probable that the Southeastern States will have a fairly light infestation at the outset but still amply sufficient to cause serious crop damage with normal rainfall during the growing months. Alabama and Mississippi may expect a very spotted infestation probably averaging heavier than Georgia and South Carolina but lighter than Louisiana. In Texas general prospects indicate a comparatively light initial infestation at practically all points except along the Gulf Coast. To summarize, the Mississippi Valley territory, especially in Louisiana, may expect from a medium to a heavy infestation, decreasing to the eastward, but with still sufficient weevils present to do serious damage provided summer weather conditions are favorable for the weevils. In Texas the weevil population is so reduced in a large portion of the State that it would require very abnormally unfavorable weather to cause serious damage but the remainder of the State, particularly along the Gulf Coast, apparently has a more or less normal condition.

As has been pointed out in connection with past reports, these records only indicate the initial emergence of weevils from hibernation and the final factor in determining the damage will be the summer climatic conditions. Certainly, some sections now face a very serious infestation and the vast majority of the cotton area has at least a normal crop of weevils. In other words, the climatic conditions so unfavorable to the weevil during the past two years have been very largely overcome and the farmer should prepare himself for a vigorous campaign to reduce damage to the minimum.

(April 1) The following records indicate the percentage of weevil emergence prior to April 1 at the various points where hibernation cages are under observation:

At College Station, Tex., emergence records are available at several near-by points for the years 1906, 1907, and 1908. At these points an average of 2.44 per cent of the weevils emerged prior to April 1 and at College Station 1.96 per cent emerged last year compared with 2.45 per cent this year.

At Tallulah, La., an average of 0.22 per cent of weevils emerged during March for the last ten years. Last year 0.01 per cent emerged during the same period while this year 0.02 per cent emerged.

At Baton Rouge, La., during March last year 1.64 per cent of the weevils emerged compared with 0.80 per cent this year.

At Clemson College, S.C., 0.55 per cent emerged last year compared with 0.05 per cent this year.

At Florence, S.C., in 1924 during March 0.3 per cent of the weevils emerged, in 1925 during the same period 1.80 per cent, and this year 0.04 per cent emerged.

At Experiment, Ga., prior to April 1 last year 0.40 per cent of the weevils emerged compared with 0.02 per cent this year.

At Poplarville, Miss., 0.05 per cent emerged during March and no weevils were reported to have emerged in the cages at the other points in Mississippi. At Holly Springs no weevils had emerged to the same date last year.

At Rocky Mount, N.C., last year, 0.05 per cent emerged compared with 0.02 per cent at Tarboro, N.C. this year. No emerged weevils were reported in the cages at Aberdeen this year compared with 0.19 per cent last year.

At Auburn, Ala., no weevils emerged in the cages during March this year.

Weevil emergence was exceedingly high prior to April 1 at one point in South Carolina. Emergence was somewhat higher at one point in Texas and one point in Louisiana this year than during the same period last year. At one point in Louisiana, one in Georgia, two in South Carolina, and two in North Carolina the emergence was somewhat lower this year than last year. At one point in Mississippi no weevils emerged during the same period either year. Records for past years are not available for comparison with records this year at other points.

Records during the last ten years at Tallulah, La., show that on April 1 an average of only 17 per cent of the total emergence for the season had taken place. At most points the weather during the present season has so far been unfavorable for emergence and particularly so in comparison with the same period in 1925. Consequently, while it is still too early to predict the final results, it is obvious that the indications favor a more or less normal emergence at most points.

(April 16): Weevil emergence generally at the different cooperating stations during the first 15 days of April has been considerably lower than was indicated by emergence during March. As was pointed out in the last report at Tallulah, La., for the last 10 years an average of 17 per cent of the total emergence took place during March while an average of slightly more than 22 per cent occurred during April. In other words, past records at Tallulah indicate that emergence during April was considerably higher than in March. The slow emergence this year was undoubtedly caused by the unfavorable weather conditions which prevailed at most of the cooperating stations during the last 15 days.

At several points near College Station, Tex., in 1906, 1907, and 1908 an average of 4.6 per cent of the weevils emerged prior to April 16. Last year at College Station 3.54 per cent had emerged on April 15 compared with 2.45 per cent this year.

At Baton Rouge, La., an average of 2.69 per cent of the weevils emerged prior to April 16 last year compared with 1.85 per cent this year.

At Florence, S.C., this year 0.25 per cent of the weevils had emerged by April 15, while last year 2.49 per cent had emerged at the same time and in 1924, 0.11 per cent had emerged.

At Aberdeen, N.C., this year 0.20 per cent weevils emerged prior to April 16 compared with 0.56 last year.

At Clemson College, S.C., prior to April 16 last year 1.78 per cent of the weevils had emerged while this year only 0.10 per cent had emerged.

At Tallulah, La., 0.03 per cent of the weevils emerged this year prior to April 16 compared with 0.01 per cent during the same

period last year. For the same period during the last 10 years an average of 0.37 per cent emerged.

At Experiment, Ga., 0.58 per cent of the weevils emerged prior to April 16 last year while this year during the same period only 0.02 per cent emerged.

At Rocky Mount, N.C., last year 0.18 per cent of the weevils emerged by April 15 and at Tarboro, N.C., this year 0.02 per cent emerged in the same period.

At Holly Springs, Miss., no weevils emerged prior to April 16 in either 1926 or 1925.

At Tallulah, La., weevil emergence this year prior to April 16 was somewhat higher than last year while at all other points, where records are available for comparison, emergence was considerably lower this year than during the same period last year.

TOBACCO

EASTERN FIELD WIREWORM (Limonius agonus Say)

Connecticut W.E. Britton (April 13): By digging we found larvae in some fields at Windsor where tobacco plants were injured last year. They were just above the subsoil about 9 inches beneath the surface.

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

Florida F.S. Chamberlin (April 23): Newly set tobacco plants in Gadsden County are moderately infested with overwintered flea beetles.

TOBACCO BUDWORM (Heliothis virescens Fab.)

Florida F.S. Chamberlin (April 16): Budworm eggs were found on young tobacco plants for the first time this spring.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana W.E. Hinds (April 24): Sugarcane borers are being found alive in the refuse of last year's cane crop in numbers that indicate a serious infestation to be encountered this season. Undoubtedly the exceedingly heavy rainfall experienced through the principal cane areas during March, and thus far during April, will prove to be an important factor in destroying many borers through flooding and the submergence of infested cane, but on the other hand it has also washed the soil from much planted cane leaving the stalks exposed and this condition will be favorable for the emergence of moths from the planted canes before the stalks can be recovered. The pupation of borer larvae is now well under way, and a few moths have emerged from pupae kept in the laboratory during the last few weeks.

FOREST AND SHADE-TREE INSECTS

GENERAL FEEDERS

BAGWORM (*Thyridopteryx ephemeraeformis* Haw.)

Ohio E.W.Mendenhall (April 19): The appearance of the cases or bags of the bagworm are very pronounced in southwestern Ohio, and seemed each year to increase in number. I find them quite plentiful in Columbus, Dayton, and Cincinnati.

Kansas J.W.McColloch (April 5): The bags of this insect are reported very abundant on cedars and boxelders at Topeka and Centerville. (April 19): A contest was conducted by the Rosedale High School to collect the bags of this insect from the trees. A total of 22,438 bags were collected.

GYPSY MOTH (*Portentaria dispar* L.)

Massachusetts A.I.Bourne (April 23): In the eastern part of the State the gypsy moth gives evidence of being present only in slight abundance -- on the whole about the same as last year.

BROWN-TAIL MOTH (*Euproctis chrysorrhoea* L.)

Massachusetts A.I.Bourne (April 21): In the eastern part of the State the brown-tail moth gives evidence of being present only in slight abundance -- on the whole about the same as last year. I have one report, however, from Essex County from the north-eastern section of the State, where there is apparently a slight increase in the numbers of the brown-tail moth as evidenced by the over-wintering tents.

ARBORVITAE

AN APHID (*Lachniella thujafolia* Theobald)

Mississippi R.W.Harned (April 21): This species was collected on arborvitae plants at Boyle, Bolivar County, on April 19.

BOXELDER

BOXELDER BUG (*Leptocoris trivittatus* Say)

Washington E.J.Newcomer (April 1): The boxelder bug has been more numerous in the Yakima Valley during the fall and winter of 1925-26 than at any time during the last ten years. The very mild winter (minimum temperature 12° F. above zero) killed practically none of them, and they have been the cause of many complaints from housewives.

ELM

ELM SCURFY SCALE (*Chionaspis americana* Johns.)

Nebraska M.H.Swenk (April 1-25): During the period covered by this

report, reports of serious infestations with the elm scurfy scale on white elms have been received.

EUROPEAN ELM SCALE (*Gossyparia spuria* Modeer)

Wisconsin S.B. Fracker (April 15): Severely damaging trees on 40 or 50 properties on the west side of Madison. Many of them are being sprayed with miscible oil.

POPLAR

COTTONWOOD BORER (*Plectrodera scalator* Fab.)

Nebraska M.H. Swenk (April 1-April 25): During the period covered by this report, reports of serious infestations with cottonwood borers on their respective trees have been received.

GREEN HOUSE AND ORNAMENTAL PLANTS

APHIIDAE

Georgia Oliver I. Snapp (April 20): Aphids are unusually abundant and destructive at the present time on shrubs and ornamental plants in yards at Fort Valley.

CITRUS MEALYBUG (*Pseudococcus citri* Risso)

Wisconsin A.C. Mommsen (March 24): This mealybug is proving unusually troublesome on house plants at Kilbourne.

HEMISPERICAL SCALE (*Saissetia hemisphaerica* Targ.)

Wisconsin T.M. Birrenkott (March 9): At Cross Plains this insect was reported attacking ferns.

LILIES

BULB MITE (*Rhizoglyphus hyacinthi* Boisd.)

Massachusetts A.I. Bourne (April 21): Mr. W.D. Whitcomb, of the substation at Waltham, reports an infestation of the bulb mite, *Rhizoglyphus hyacinthi*, on roots of calla lilies where severe stunting of the plants and checking of the blooms are being caused.

CHRYSANTHEMUM

BLACK CHRYSANTHEMUM APHID (*Microsiphoniella sanborni* Gill.)

Mississippi R.W. Harned (April 21): The black chrysanthemum aphid was reported as damaging chrysanthemums at Grenada and Moss Point on April 16, and at Booneville on April 20.

Texas F. C. Bishop (April 26): Chrysanthemums in Dallas are unusually heavily infested with the chrysanthemum aphid.

CHRYSANTHEMUM GALL MIDGE (Diarthronomyia hypogaea F. Loew)

Ohio E.W. Mendenhall (April 19): The chrysanthemum midge is kept in pretty good control in the plant-production houses in the southwestern section of Ohio and I believe that this has been the result of diligent applications of nicotine sulphate solution. Some have been using calcium cyanide but a little early to tell the results.

LILAC

OYSTER-SHELL SCALE (Lepidosaphes ulmi L.)

Nebraska M.H. Swenk (April 1-April 25): During the period covered by this report, reports of serious infestations with the oyster-shell scale on lilac have been received.

ROSE

AN APHID (Macrosiphum rosae folium Theob.)

Mississippi R.W. Harned (April 21): Macrosiphum rosae folium was collected on rose at Kosciusko on April 12. Severe damage to roses from aphids was reported at Durant on April 14. Medium damage was reported from Water Valley on April 13.

I N S E C T S A T T A C K I N G M A N A N D

D O M E S T I C A N I M A L S

MAN

BEDBUG (Cimex lectularis L.)

Nebraska M.H. Swenk (April 1-April 25): During the period covered by this report, reports of household infestations by the bedbug have been received.

SAND FLIES (Culicoides punctipennis)

Texas F.C. Bishop (April 26): This sand fly has been so numerous as to cause serious concern on the part of the farmers in Freestone and adjacent counties. It appears that the insect has been breeding in the streams which have been made distinctly salty by the discharge of water from some of the wells near-by oil fields. The sand flies have been active on warm days throughout the winter, but have become much more annoying during the past few weeks. It has been

necessary to discontinue plowing in bottom-land fields in some instances on account of the severity of attack on the teams and men.

CATTLE

OX WARBLERS (*Hypoderma lineatum* Devill. and *H. bovis* DeG.)

General Statement

F.C.Bishopp (April 26): Sufficient observations were not made during the winter and spring of 1926 to justify general conclusions regarding the degree of infestation of cattle by these insects. Examinations of herds in the vicinity of Washington, D.C., indicate that they are about normal in numbers in that section. Continued observations during the winter and spring in Burke's Garden, Va., by L.I.Case show the infestations to run high, although figures for previous years are lacking. Several animals were found to carry over 100 grubs at one time. Collections on March 23 contained 94.3 per cent *Hypoderma bovis*, and 5.7 per cent *H. lineatum*. All of the latter were practically mature, indicating that cattle were practically free of this species on that date. Mr. C.C.Compton reports a heavier infestation in Kane and adjacent counties in Illinois than is normal for that section. Stockmen in Kansas are under the impression that grubs were more numerous this year than normally. Apparently the number of grubs at various points in Texas was about normal.

Oregon

Don C. Mote (March 12): Last-stage larvae of *Hypoderma bovis* were squeezed from the backs of cattle on this date. None of them were mature, however.

HORN FLY (*Haematobia irritans* L.)

Texas

D.C.Purman (April 4): The Horn fly has increased considerably during the last week and they are noticeable on most cattle, and may have as high as 1,000 to 1,200 flies on them. (April 9): Every cow observed from Uvalde to 25 miles north has black patches of flies on them; there are from 500 to 2,500 flies on all cattle, and they are worrying cattle to a great extent, and horses and mules are being annoyed. (April 22): This section (Uvalde) was visited by a storm and heavy rain (4 to 12 in.) on April 20 and it is rare to see a horn fly on any stock.

F.C.Bishopp (April 5): Horn fly infestation in this section (Wortham) is comparatively light for this time of the year. The number of flies per animal does not average over 50.

CATTLE LOUSE (*Trichodectes scalaris* Nitzsch)

Wisconsin

T.Gustafson (March 13): Cattle are severely attacked by this insect at Brantwood.

POULTRY

STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

Texas F.C.Bishopp (April 5): This flea was found to be present in considerable numbers on all classes of poultry in this vicinity (Wortham). The pest, however, had not become sufficiently numerous to cause noticeable damage.

D.C.Parman (April 22): It is worthy of note that the hen flea has practically disappeared during the month from what was promising to be a season of heavy losses from this pest. The weather during the month has been characterized by high humidity and heavy rains that flooded the entire country. The rains fell on the night of April 9 and during the day and night of April 20 and 21.

INSECTS THREE STYLING HOUSES AND PREMISES

HOUSE FLY (Musca domestica L.)

Texas F.C.Bishopp (April 26): at Dallas the cool rainy weather this spring has tended to hold the house fly in check. Comparatively few flies are present in the residential districts, and there has not been a great increase in the number of the adults of this species about packing houses and other attractive places.

FLIES

Texas E.W.Laake (April 24): Samples of flies captured in traps baited with a blowfly bait during the last month showed the following percentages:

Species	Mar. 29 :	Apr. 2 :	Apr. 9 :	Apr. 16 :	Apr. 23 :
Phormia regina Meig.	59.4 :	51.4 :	68.6 :	79.0 :	58.8 :
Musca domestica L.	33.4 :	41.2 :	22.0 :	15.0 :	22.8 :
Lucilia sericata Meig.	4.0 :	5.0 :	3.8 :	2.6 :	2.2 :
Chrysomyia macellaria Fab.	.0* :	.6 :	2.4 :	1.8 :	10.2
Muscina stabulans Fall.	.2 :	.2 :	.4 :	.4 :	1.0
Ophyra acnecens Zeid.	2.6 :	.4 :	1.0 :	1.0 :	4.2
Other species	.4 :	1.2 :	1.8 :	.2 :	.8

POWDER-POST BEETLES (Lyctus spp.)

Wisconsin Frank Sotona (April 7): "Worms" working in the framework of the barn are presumably of this group. Specimens have not been received. This insect is reported attacking timber in a barn and is said to be weakening the framework.

AN ANT (Tapinoma sessile Say)

Mississippi R.W.Harned (April 21): Ants that were identified as Tapinoma sessile were received from the Home Demonstration Agent at Marks, Quitman County, early in April, with a statement that this species was causing considerable annoyance throughout the entire town.

COCKROACHES (Blattidae)

Nebraska M. H. Swenk (April 1-April 25): During the period covered by this report reports of household infestations by the Oriental and German Cockroaches have been received.

TERMITES (Reticulitermes et al.)

Nebraska M. H. Swenk (April 25): Additional reports of injury by the termite Reticulitermes tibialis Banks were received from Grand Island under date of April 7, and under date of April 19 a house was reported from Franklin County as having its sills and door casings destroyed by these pests.

Kansas J. W. McColloch (April 1): White ant injury to woodwork in dwellings has been received from the following localities since the last report: Humboldt, Solomon, Cherryvale, Paola, and Manhattan. At Peabody termites have caused serious damage to the woodwork in a brick theater.

Texas F. C. Bishopp (April 26: A number of reports have come to this office of damage to dwellings and other buildings at Dallas from termites.

Missouri A. C. Burrill (April 26): At Herman, a 50-year-old farmhouse with black oak joists had to be entirely rebuilt with white oak joists, to prevent it from being attacked by this insect.

I N S E C T S / I N J U R I O U S / T O S T O R E D P R O D U C T S

Wisconsin C. B. Adams (April 1): This insect was attacking flour and cereals at Watertown. The owner had found difficulty in eradicating it.